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EXAMINER
WASHINGTON, JAMARES

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/786,503	YODA, AKIRA	
	Examiner	Art Unit	
	JAMARES WASHINGTON	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *2/26/2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Amendments and response received October 21, 2008 have been entered. Claims 1, 2 and 4-25 are currently pending in this application. Claims 22-25 have been newly added by this amendment. Amendments and response are addressed hereinbelow.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "wherein the second information is a right polygon" as recited in claims 23 and 24 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 2, 4-11, 13-19 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoads (US 20030128861 A1) in view of Paul Lapstun et al (US 7132612 B2).

Regarding claim 1, Rhoads discloses print generating device for hiddenly embedding first information in an image to acquire an information-attached image (Fig. 2 and ¶ [107]) and generating a print on which said information-attached image is recorded (¶ [160]), comprising: embedding means (¶ [177]) for hiddenly embedding the first information in the image (7 [270]); and

information attaching means for attaching second information (Fig. 2 numeral 224 and ¶ [107]), which indicates that said first information is embedded in said image (Fig. 2 numeral 216 and ¶ [103]), to said print wherein said information attaching means is means to attach said second information to said print by a visual mark (¶ [19], ¶ [23], and ¶ [413]). As explained in paragraph 19, the watermark structure can have multiple components, each having different attributes including location and orientation. For example, one component may carry a message, while another component may serve to identify the location or orientation of the watermark similar to a "calibration pattern" as previously rejected. While described here as watermark components, one can also construe the components to be different watermarks. This enables the watermark technology described throughout the reference to be used in applications using two or more watermarks. The calibration patterns have been described as adjuncts to digital watermarks, facilitating their detection. Therefore, the "calibration pattern" merely stands in for the fact that an additional watermark can be used to realize the same functionality of the "calibration pattern" (as stated above) *See also arguments presented in advisory action dated 04/15/2008*);

Rhoads fails to expressly disclose wherein the second information has a shape that facilitates detection of geometrical distortions caused by tilt of an optical axis of a photographing lens for taking the image.

Lapstun et al, in the same field of endeavor teaches embedded information (Fig. 5 physical representation of a netpage tag) which has a shape that facilitates detection of geometrical distortions caused by tilt of an optical axis of a photographing lens for taking the image (Col. 10 lines 40-46 wherein the fixed target structures allow a sensing device to infer the "tag's" three-dimensional orientation relative to the sensor. Also see Col. 55 lines 34-39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the second information, which indicates that first information if embedded, as disclosed by Rhoads has a shape that facilitates detection of geometrical distortions caused by tilt of an optical axis of a photographing lens as taught by Lapstun et al to provide the system with the degree of tilt for correction thus the first information can be correctly interpreted.

Regarding claim 2, Rhoads discloses the print generating device as rejected in claim 1 above, wherein said information attaching means is means to attach said second information to said print by hiddenly embedding said second information in said image in a different embedding manner than the manner in which said first information is embedded ("The watermark components may be defined, embedded and extracted in different domains" at ¶ [22], "In the embodiment earlier-described, the calibration pattern is printed as a visible artistic element of the security document. However, the same calibration effect can be provided subliminally if desired" at ¶ [351]).

Regarding claim 4, Rhoads discloses an information detecting device ("The detector looks for the watermark signal..." at ¶ [24]) comprising:

input means for receiving photographed-image data obtained by photographing an arbitrary print...with image pick-up means ("The detector performs a series of preprocessing operations on the native image...It begins by filling memory with one or more frames of native image data..." at ¶ [167], "In applications where a camera captures an input image..." at ¶ [168],

"A digital camera or scanner 43 may be used to capture the target image for the detection process described above" at ¶ [252]).

judgment means for judging whether or not second information, which indicates that first information is embedded in an image, is detected from said photographed-image data ("Indeed, the use of such calibration patterns to register both watermark and visible structure image data for recognition is an important economy that can be gained by integration of a visible structure detector and a watermark detector into a single system" at ¶ [383]), and

processing means for performing a process for detection of said first information on only the photographed-image data from which said second information is detected ("To extract the message, the reader captures a representation of the signal suspected of containing a watermark and then processes it to detect the watermark and decode the message" at ¶ [78]). The location of the watermark is given from the second information as rejected in claim 1 above. The reader captures only the part suspected of containing a watermark (from the information given by the second information/watermark) and processes it accordingly. Examiner maintains previous grounds of rejection incorporated herein from Final Office Action dated November 26, 2007 explaining further challenges of the capture/read processing with further explanation given above.

Regarding claim 5, Rhoads discloses the information detecting device as rejected in claim 4 above, further comprising distortion correction means for correcting geometrical distortions contained in said photographed-image data when said processing means is means to perform detection of said first information as a process for detection of said first information ("...dealing

with the different types of distortion...cameras have different sensitivities to light. In addition, their lenses have different spherical distortion..." at paragraph [183]), wherein said judgment means and said processing means are means to perform said judgment and said detection on the photographed-image data corrected by said distortion correction means ("At the close of the pre-processing stage (4.1 Detector Pre-Processing, at ¶ [166]), the detector has selected a set of blocks for further processing..." at ¶ [184]).

Regarding claim 6, Rhoads discloses the information detecting device as rejected in claim 5 above, wherein said distortion correction means is a means for correcting geometrical distortions caused by a photographing lens provided in said image pick-up means or geometrical distortions caused by a tilt of an optical axis of said photographing lens relative to said print ("...the watermarked image is likely to undergo several transformations...Some of these transformations include: scaling, rotation, inversion, flipping differential scale, and lens distortion" at ¶ [160]. "When building a detector implementation for a particular application, the developer may implement counter-measures to mitigate the impact of the types of transformations and distortions..." at ¶ [161]).

Regarding claim 7, Rhoads discloses the information detecting device as rejected in claim 4 above, wherein said processing means is a means for performing a process for transmitting said photographed-image data to a device that detects said first information, as a process for detection of said first information, only when said judgment means detects said second information from said photographed-image data ("...detection watermark..." Fig. 2, numeral 216, "The detection

watermark is specifically chosen to assist in identifying the watermark and computing its orientation in a detection operation" at ¶ [103]. Flow chart depicted in Figure 12 shows the transmission of image data after detection of a "detection watermark explained at ¶ [159].)

Regarding claim 8, Rhoads discloses an information-detecting device as rejected in claim 4 above with the print-generating device as rejected in claim 2 above (Desirably, the visible structure detector and the watermark detector are integrated together as a single hardware and/or software tool" at ¶ [378]). Claim 2 rejection above embodies both visible and invisible marks, therefore covering the use of visible marks.

Regarding claim 9, Rhoads discloses the information-detecting device as rejected in claim 8 above, further comprising the distortion correction means and processing means as rejected in claim 5.

Regarding claim 10, Rhoads discloses the information-detecting device as rejected in claim 9 above, wherein the distortion correction means is a means for correcting geometrical distortions as rejected in claim 6.

Regarding claim 11, Rhoads discloses the information detecting device wherein the image pick-up means is a camera provided in a portable terminal as rejected in claim 4 above.

Regarding claim 13, Rhoads discloses the information detecting device as rejected in claim 4, wherein said first information is location information representing a storage location of audio data correlated with said image ("Watermarking can also be used in various "description" or "synthesis" language representations of content, such as Structured Audio, Csound, NetSound...by specifying synthesis commands that generate watermark data as well as the intended audio signal" at ¶ [391]), and which further comprises audio data acquisition means for acquiring said audio data, based on location information ("Finally, a reader extracts a message in the watermark signal from the combined signal..." at ¶ [24]. "...digital watermarking is applied to media such as...audio signals" at ¶ [15]).

Regarding claim 14, Rhoads discloses the print generating method carried out by the print generating device as rejected in claim 1 above.

Regarding claim 15, Rhoads discloses the print generating method carried out by the print generating device as rejected in claim 2 above.

Regarding claim 16, Rhoads discloses the information detecting method carried out by the information detecting device as rejected in claim 4 above.

Regarding claim 17, Rhoads discloses a program for causing a computer to execute the method as rejected in claim 14 above ("Fig. 20 illustrates an example of a computer system that serves as an operating environment for software implementations of the watermarking systems

described above. The embedder and detector implementations are implemented in C/C++ ..." at ¶ [245]).

Regarding claim 18, Rhoads discloses the program as rejected in claim 17 above and incorporating the method as rejected in claim 2 under the same grounds of rejection as presented in the rejection of claim 17.

Regarding claim 19, Rhoads discloses the program as rejected in claim 17 above.

Regarding claim 25, Rhoads discloses the print generating device according to claim 1, wherein the photographing lens takes a snapshot of the printed image ("A digital camera…may be used to capture the target image for the detection process described above" at ¶ [252]. Digital cameras take snapshots of images. Applicant describes the photographing lens as being that which "acquires" the image after it has been "printed". Since the image has been printed, the first and second information would have already been attached as evident by claim 1. This suggests the information detecting device as rejected in claim 4 above.)

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoads and Lapstun as applied to claim 4 above, and further in view of Yamagata (US 20020018139 A1).

Regarding claim 12, Rhoads discloses an information detecting device as rejected in claim 4 above, wherein said image pick-up means is equipped with display means for displaying

said print to be photographed ("A monitor 1247 or other type of display device is also connected to the system bys 1223 via an interface..." at ¶ [254]. Fig. 20 shows the camera 1243 directly connected to the camera interface, which is a part of the system bus 1223 that leads to the video adapter 1248. The monitor 1247 is connected to the system bus via the video adapter 1248).

Rhoads fails to teach tilt detection means for detecting a tilt of an optical axis of said image pick-up means relative to print, and display control means for displaying information representing the tilt of said optical axis detected by said tilt detection means, on said display means.

However, Yamagata teaches the above tilt detection means ("An image measurement apparatus according to a preferred embodiment of the present invention comprises a camera, a control mechanism for controlling tilt angle of optical axis of the pertinent camera...and a device for detecting tilt angle of optical axis..." at ¶ [29]).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to include the tilt detection device taught by Yamagata in the image pick-up device of Rhoads so that "detecting accuracy is enhanced" when capturing an image of a watermark. Since the watermark detector performs a series of correlation or other operations on the captured image to detect the presence of a watermark, it is critical to get an accurate representation of the mark.

In addition Rhoads teaches a video adapter (Fig. 20, numeral 1248) for controlling what will be displayed on the monitor.

Rhoads does not teach display control means for displaying information representing the tilt of said optical axis detected by said tilt detection means, on said display means.

However, Yamagata discloses the above control means ("An image processing signal stored in the image memory 43 is computed in an image CPU 44, and outputted to an image monitor through a D/A (Digital/Analog) converter 45 to display an image. The aforesaid host CPU 32 conveys image data to the image CPU 44 and to a motor controller 36 and at the same time performs a series of jobs including adjustment of optical axis..." at paragraph [77]) for displaying information representing the tilt of said optical axis.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to use the D/A converter as taught by Yamagata as the video adapter disclosed by Rhoads to provide a way of displaying the information representing the tilt of said optical axis detected by said tilt detection means because it would allow the viewer to see the through image of the camera, an image to be processed, and a result of processing to compare the corrected image with the original.

5. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoads and Lapstun as applied to claims 2 and 1 respectively, and further in view of well known prior art.

Regarding claim 20, Rhoads suggests the print generating device according to claim 2, wherein the embedding manner of the second information is easier to process than the embedding manner in which the first information is embedded (¶ [19]) with reference to signal strength of the watermarks). Rhoads states that two watermarks may have differing signal

strengths, which is directed towards the "reading level" or processing of the particular watermark.

Rhoads does not expressly state that the second information is easier to process than the first information although suggesting this is indeed possible.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the second information, embedded in the image, easier to process or "read/decode" than the first information because the second information embedded in the image merely contains information to alert the user and reader to further information embedded within the image and would therefore reduce processing time.

Regarding claim 21, Rhoads suggests the print generating device according to claim 1, wherein the second information is low-frequency information (¶ [105]).

Rhoads does not expressly state that the second information is low-frequency information although suggesting this is indeed possible.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the second information according to claim 1, wherein the second information is attached by a visual mark, to be embedded utilizing low-frequency information because, as stated by Rhoads in ¶ [105], "... if the [impulse functions] are located in a low frequency range, they may be noticeable in the watermarked image". Since the second information is noticeable and should be easier to process, it would be obvious to utilize low frequency information as the second information.

6. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoads in view of Lapstun as applied to claim 1 above, and further in view of Akira Akashi (US 7197157 B2).

Regarding claim 22, Rhoads discloses the print generating device according to claim 1, wherein the second information is attached visibly and fixedly to the image (see rejection of claim 1, emphasis on ¶ [413] wherein watermarks can be visibly attached to a medium.

Rhoads fails to explicitly disclose the second information is attached to a discrete sub-part of the image.

Akashi, in the same field of endeavor of providing a method of embedding visible watermarks in digital photographs (Abstract), teaches watermarks attached to a discrete sub-part of the image (Col. 4 lines 63-66).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the second information, which is attached visibly and fixedly to an image as disclosed by Rhoads to utilize the teachings of Akashi wherein the "second information" is attached to a corner of image data as opposed to in a central portion of the image to avoid the visible mark interfering with the object image (Col. 4 line 67 through Col. 5 line 1, Akashi).

7. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoads and Lapstun in view of Akashi as applied to claim 22 above, and further in view of Mark J. Stefik et al (US 7031471 B2).

Regarding claim 23, Rhoads et al discloses the print generating device according to claim 22 (see rejection of claim 22 above).

Rhoads fails to explicitly disclose wherein the second information is a right polygon.

Absent any clear definition within the specification, Examiner assumes Applicant is referring to either a square or rectangle when claiming a "right polygon". Stefik et al, in the same field of endeavor of protecting digital works through the use of watermarks (Abstract), teaches wherein the second information is a right polygon (Fig. 7 numeral 703 and Fig. 8 which shows a collection of Glyph boxes all of which are “right polygons”).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the print generating device as disclosed by Rhoads wherein the second information is attached visibly and fixedly to a discrete sub-part of the image to utilize the teachings of Stefik et al wherein the second information is a right polygon. The modification of Rhoads to include the teachings of Stefik, as stated above, would have constituted the mere arrangement of old elements with each performing the same function it had been known to perform, the combination yielding no more than one would expect from such an arrangement.

8. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rhoads and Lapstun as applied to claim 1 above, and further in view of Mark J. Stefik et al (US 7031471 B2).

Regarding claim 24, Rhoads et al discloses the print generating device according to claim 1 (see rejection of claim 1 above).

Rhoads fails to explicitly disclose wherein the second information is a right polygon.

Stefik et al teaches wherein the second information is a right polygon (Fig. 7 numeral 703 and Fig. 8 which shows a collection of Glyph boxes all of which are "right polygons").

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the print generating device as disclosed by Rhoads wherein the second information is attached visibly and fixedly to a discrete sub-part of the image to utilize the teachings of Stefik et al wherein the second information is a right polygon. The modification of Rhoads to include the teachings of Stefik, as stated above, would have constituted the mere arrangement of old elements with each performing the same function it had been known to perform, the combination yielding no more than one would expect from such an arrangement.

Response to Arguments

9. Applicant's arguments filed October 21, 2008 have been fully considered but they are not persuasive.

Applicant's remarks: The tag 4 cited by the Examiner is a series of invisible ink items that determine how the pen has passed over a surface. See col. 6, lines 58-61. A circular pattern is chosen because it is rotationally invariant and is resistive to perspective distortion. The cited tag is circular in shape and thus is less adaptable for distortive recognition. The size of the tag, 4 mm in diameter, also fails to "facilitate" the image pick up and detection of geometric effect. The tag is also invisible and thus cannot be photographed. Applicant submits that all these

aspects not only fail to teach the second information as claimed, but tend to teach from the second information as described by independent claim 1.

Examiner's response: Applicant's assertion that the cited "tag" being circular in shape would make it less adaptable for distortive recognition is unfounded. Applicant's specification clearly states (Pg. 43 lines 21 through Pg. 44 line 1) "The mark K is not limited to the mark  . By employing a pattern with two symmetrical axes crossing at right angles, such as a circular pattern, an elliptical pattern, a star pattern, a square pattern, a rectangular pattern, etc., the geometrical distortions in the photographed-image data S2 caused by the tilt of the optical axis X can be corrected, as in the case of the mark  ." This suggests the listed patterns are equally viable in perceiving tilt distortion in an image. Applicant gives no advantage of using one mark over the other and uses as an example in the present application, the circle inside of a circle as the chosen mark. This directly contradicts Applicant's assertion at Pg. 43 lines 21-26 that "By employing a pattern with two symmetrical axes crossing at right angles, such as a circular pattern…the geometrical distortions in the photographed-image data S2 caused by tilt of the optical axis X can be corrected…".

The size of the "tag" is irrelevant to the purpose of the secondary reference's teaching, which is the "shape" of the element which facilitates distortion caused by tilt. The applied reference simply provides a "shape which facilitates distortion caused by tilt" to the "visible mark" as disclosed by Rhoads. In other words, using the circular "tag shape" as taught by Lapstun for the visible mark as disclosed by Rhoads would provide a "visual mark, wherein the

second information has a shape that facilitates detection of geometrical distortions caused by tilt…".

Furthermore, Applicant conveniently left out an import aspect of the current prior art of record in regards to "a circular pattern [being] chosen because it is rotationally invariant and is resistive to perspective distortion". Lapstun teaches "the ring is easy to detect because it is rotationally invariant and because a simple correction of its aspect ratio removes most of the effects of perspective distortion. Meaning if the tag's shape is sensed as, for example, an ellipse, then the aspect ratio would provide one of ordinary skill in the art with the information needed to correct for tilt.

The "size" of the tag as disclosed by Lapstun is also largely irrelevant as "The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference.... Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art." In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). See also In re Sneed, 710 F.2d 1544, 1550, 218 USPQ 385, 389 (Fed. Cir. 1983) ("[I]t is not necessary that the inventions of the references be physically combinable to render obvious the invention under review."); and In re Nievelt, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973) ("Combining the teachings of references does not involve an ability to combine their specific structures."). The secondary reference, in the present case, simply teaches that it would be obvious to provide a "shape" that facilitates detection of geometrical distortions caused by tilt. In other words, the "tag" per se, as taught by Lapstun, is not bodily incorporated into the invention as disclosed by Rhoads, rather Lapstun suggests that it

would be obvious to utilize the disclosed shape of the tag for the visual mark as disclosed by Rhoads to facilitate detection of geometrical distortions.

Regarding the argument that the tag is invisible and therefore cannot be photographed, the reasoning above applies wherein the teachings of a secondary reference are not bodily incorporated into the primary reference. Furthermore, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., Inc., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant's remarks: Applicant notes that Rhoads teaches distributed watermarks. That is, it teaches embedding a watermark throughout a digital signal. See paragraphs [0068] and [0070]. It teaches taking these steps in order to make a watermark robust enough "to withstand routine manipulation, such as data compression, copying, linear transformation, flipping, inversion, etc." See paragraph [0067]. In contrast, Lapstun teaches discrete netpage tags, which may be placed so that a plurality of tags completely cover a page. See Lapstun FIGS. 5 and 6, and Col. 10, lines 40-46. Applicant submits that incorporating the features of Lapstun into Rhoads as suggested by the Examiner would destroy the functionality of Rhoads, which teaches, as above, a more distributed watermark.

Using the shape of Lapstun's tags would require making the watermark of Rhoads discrete, which would destroy its functionality. Hence, Applicant submits that the Examiner has given insufficient reason to combine these references.

Examiner's response: Rhoads further teaches that there are a number of different techniques that may be applied to address design considerations, such as scattering and gain control (See ¶ [69-72]), none of which has to do with the present rejection in which a "visible" watermark is associated with the "second information". It appears applicant is referencing an alternate embodiment of the cited prior art as relating to the "second information" which was not relied upon in the rejection as previously presented and would not be relevant to the "type" of watermark in which the "second information" represents. The techniques cited by applicant are for watermarks which are to be "imperceptible" to the human eye. The second information has already been determined to be perceptible in that it alerts the user to first information which is located within the image which, ironically, could be embedded using the above "spreading" method.

One of ordinary skill in the art would simply select the appropriate signal processing technique which best fits their design considerations. Design considerations for the second information would deal more with perceptual analysis, further discussed in ¶ [73]. Examiner directs Applicant's attention to the portion of the cited prior art which is relied upon for reading on the "second information", ¶ [413], in which digital watermarks can be realized using conventional watermarking technologies and can be adapted to display a "visual watermark" instead of a logo or the like.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMARES WASHINGTON whose telephone number is (571) 270-1585. The examiner can normally be reached on Monday thru Friday: 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on (571) 272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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